

CLAIMS

What is claimed is:

1. An overheated steam oven, including a cabinet to define a cooking cavity therein; and an overheated steam generator to supply overheated steam into the cooking cavity, the overheated steam generator comprising:

- a first vessel containing a predetermined amount of water therein;
- a second vessel, having an upper portion placed in the front vessel and a lower portion;
- an inlet, provided at the upper portion of the second vessel, to communicate with an upper portion of the first vessel;
- an outlet, provided at the lower portion of the second vessel, to connect to the cooking cavity;
- a heater to heat the water contained in the first vessel to cause steam to rise and enter the second vessel, and to overheat the steam entering the second vessel.

2. The overheated steam oven according to claim 1, wherein the upper portion of the second vessel has an outer diameter which is smaller than an inner diameter of the first vessel, and is inserted into the first vessel from a lower end to an upper portion of the first vessel along a central axis of the first vessel.

3. The overheated steam oven according to claim 2, wherein the first vessel and the second vessel each provide insulation.

4. The overheated steam oven according to claim 2, wherein each of the first and second vessels comprises:

- an inner vessel part; and
- an outer vessel part which surrounds and is separated from an outer surface of the inner vessel part, with space between the inner vessel part and the outer vessel part being a vacuum.

5. The overheated steam oven according to claim 4, further comprising a shielding material to fill the space between the inner vessel part and the outer vessel part to intercept radiant heat.

6. The overheated steam oven according to claim 2, wherein the first vessel comprises an upper plate to close an upper end of the first vessel, and the heater include terminal which extend upward and is supported by the upper plate.

7. The overheated steam oven according to claim 6, further comprising a feed pipe and a drain pipe respectively coupled to the upper plate and the lower end of the first vessel, to feed and drain water into and from the first vessel.

8. The overheated steam oven according to claim 7, further comprising a disk-shaped feed guide plate installed under the upper plate to be spaced apart from the upper plate, to guide the water supplied through the feed pipe into the first vessel, the disk-shaped feed guide plate having an outer diameter, which is smaller than the inner diameter of the first vessel and which is larger than the outer diameter of the second vessel.

9. The overheated steam oven according to claim 8, wherein the disk-shaped feed guide plate comprises an insulating material to reduce heat loss of the steam rising from the first vessel.

10. The overheated steam oven according to claim 6, further comprising a water level sensor coupled to the upper plate and extended in the first vessel, to be immersed in the water contained in the first vessel.

11. The overheated steam oven according to claim 1, wherein the heater has a spiral shape.

12. The overheated steam oven according to claim 1, further comprising a feed pipe and a drain pipe respectively coupled to the first vessel.

13. The overheated steam oven according to claim 1, further comprising a water level sensor coupled to the first vessel, to monitor a level of the water contained in the first vessel.

14. The overheated steam oven according to claim 1, wherein the second vessel comprises a bent part which is formed by bending a lower end of the second vessel toward a rear wall of the cooking cavity, the bent part being connected at a front end thereof to a steam inlet port provided on the rear wall of the cooking cavity.

15. The overheated steam oven according to claim 1, further comprising an exhaust path provided at an upper portion in the cooking cavity to discharge the steam from the cooking cavity to an outside of the cooking cavity.

16. The overheated steam oven according to claim 1, wherein each of walls of the cooking cavity comprises a multi-layered panel that comprises a plurality of sheets spaced apart from each other to insulate the cooking cavity.

17. An overheated steam oven, including a cabinet having a cooking cavity therein; and an overheated steam generator to supply overheated steam into the cooking cavity, the overheated steam generator comprising:

a first vessel containing water;

a second vessel, having an upper portion placed in the first vessel and a lower portion, with an inlet provided at the upper portion of the second vessel to communicate with an interior of the first vessel;

an outlet, provided at the lower portion of the second vessel, connected to the cooking cavity; and

first and second heaters to heat water to cause steam to enter the second vessel, and to overheat the steam which enters the second vessel.

18. The overheated steam oven according to claim 17, wherein the first heater is installed in the first vessel to be immersed in the water contained in the first vessel, and the second heater is installed in the second vessel.

19. The overheated steam oven according to claim 17, wherein the upper portion of the second vessel is inserted into the first vessel from a lower end to an upper portion of the first vessel.

20. An overheated steam oven, including a cabinet to define a cooking cavity therein; and an overheated steam generator to supply overheated steam into the cooking cavity, the overheated steam generator comprising:

a first heater to generate steam;
a second heater, inside the first heater, to overheat the generated steam; and
a vessel to guide the generated steam towards the second heater so as to allow the generated steam to be heated by the second heater.

21. The overheated steam oven according to claim 20, wherein the second heater is concentric with the first heater.